U.S. Department of Transportation

Federal Aviation Administration

Advisory Circular

Subject: INTRODUCTION TO SAFETY MANAGEMENT SYSTEMS (SMS) FOR AIRPORT OPERATORS

Date: DRAFT

Initiated by: AAS-300

AC No: AC 150/XXXX-XX

Change:

1. PURPOSE. This Advisory Circular (AC) contains Federal Aviation Administration (FAA) guidance for airport safety management systems. This AC:

a. Introduces the concept of a safety management system (SMS).

b. Provides guidance for SMS development by airport operators.

2. BACKGROUND. The application of a systematic, proactive, and well-defined safety program (as is inherent in an SMS) allows organizations to strike a realistic and efficient balance between safety and production. The forecast growth in air transportation requires a systematic approach to safety in order to achieve a continuing improvement in the level of aviation safety. SMSs are based on the premise that there will always be hazards and risks associated with the operation of an airport. A proactive management system is in place in order to identify and mitigate those risks.

The International Civil Aviation Organization (ICAO) has developed safety standards for member States, including the requirement for States to have a safety program with the intended purpose of achieving an acceptable level of safety in the operation of aircraft. ICAO Annex 14, Volume I (Airport Design and Operations) was amended on November 23, 2006, to require member States to have certificated airports establish an SMS. In the United States, about 570 airports are certificated under 14 CFR part 139, *Certification of Airports*.

Two important points to note about the ICAO requirement are:

- The goal is an acceptable level of safety for each action, not necessarily the "highest" level of safety, and

- The acceptable level of safety is to be established by each ICAO contracting State. In the United States, the FAA uses a standard matrix of risk levels for various phases of operation, depending on the severity of potential consequences. For actions not regulated by the FAA, the service provider determines the acceptable level of safety for each action.

This AC is the first of a series of FAA guidance materials planned for SMS implementation at U.S. airports. The FAA has initiated a rulemaking action to consider amendment of Part 139 to require certificated airports to implement an SMS, consistent with the recent ICAO Annex 14 requirement. If the FAA adopts a rule to require airport operators to implement SMS, the agency will issue further guidance on compliance with that rule.

An SMS is a supplement to current FAA airport safety and certification rules in 14 CFR part 139, and does not replace any existing FAA regulations or policy guidance.

3. APPLICATION. The material contained in this AC is applicable for use at all civil airports. A safety management system can be integrated into all aspects of airport operations, business and management practices. This includes consideration of work performed by all direct contractors.

The FAA expects to issue a notice of proposed rulemaking in 2007, and encourages airport operators and others to comment on the draft rule when issued. At this time the implementation of an SMS is voluntary but strongly encouraged.

4. COMMENTS OR SUGGESTIONS for improvements to this AC should be sent to:

Manager, Airport Safety and Operations Division
Federal Aviation Administration
ATTN: AAS-300
800 Independence Avenue, S.W.
Washington, DC 20591

5. COPIES OF THIS AC. The Office of Airport Safety and Standards is in the process of making ACs available to the public through the Internet. These ACs may be found through the FAA home page (www.faa.gov). A printed copy of this AC and other ACs can be ordered from the U.S. Department of Transportation, Subsequent Distribution Office, Ardmore East Business Center, 3341 Q 75th Avenue, Landover, MD 20785.

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Director of Airport Safety and Standards

TABLE OF CONTENTS

LIST OF FIGURES

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CHAPTER 1: GENERAL INFORMATION

1.1. PURPOSE.

This chapter provides general guidelines for Safety Management Systems (SMSs).

1.2. DEFINITIONS.

Accountable Executive – A single, identifiable person within the organization whom will assume full accountability of the SMS. This Accountable Executive must have adequate control over financial and human resources to respond to organizational safety needs.

Gap Analysis – Identification of existing safety components, compared to SMS program requirements. Gap analysis provides an operator an initial SMS development plan and roadmap for compliance.

Risk Assessment – Assessment of the system or component to establish that the achieved risk level is lower than or equal to the tolerable risk level.

Safety Assessment – A systematic, comprehensive evaluation of an implemented system to show that the safety requirements are met.

Self-Assessment Plan – A formal, management-approved document that describes an airport operator's self-assessment activities and how often they occur, provides a schedule for completing the assessments, and identifies the reports to be generated.

Safety assurance – SMS process management functions that systematically provide confidence that organizational products/services meet or exceed safety requirements.

Safety Management System (SMS) – The formal, top-down business-like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (including safety risk management, safety policy, safety assurance, and safety promotion).

Safety Policy – Defines the fundamental approach to managing safety that is to be adopted within an organization. Safety policy further defines the organization's commitment to safety and overall safety vision.

Safety promotion – A combination of safety culture, training, and data sharing activities that support the implementation and operation of an SMS in an organization.

Safety risk – The composite of the likelihood (i.e., risk) of the potential effect of a hazard, and predicted severity of that effect. As an example, the possibility of an overshoot by an aircraft landing on an icy runway would be considered a safety risk of the hazard.

Safety risk control – Anything that reduces or mitigates the safety risk of a hazard (i.e., either or both the risk of an event and its severity). Safety risk controls must be written in requirements language, measurable, and monitored to ensure effectiveness.

Safety Risk Management (SRM) – A formal process within the SMS composed of describing the system, identifying the hazards, assessing the risk, analyzing the risk, and controlling the risk. The SRM process is embedded in the operational system; is not a separate/distinct process.

Severity – The consequence or impact of a hazard in terms of degree of loss or harm.

1.3. SAFETY CULTURE.

Effective safety management requires more than establishing an appropriate organizational structure and establishing rules and procedures to be followed. It requires a genuine commitment to safety on the part of top management. The attitudes, decisions and methods of operation at the policy-making level demonstrate the priority given to safety.

A key indicator of management's commitment to safety is the adequacy of resource allocations. Establishing an appropriate management structure, assigning responsibilities and accountabilities, and allocating appropriate resources must be consistent with the organization's stated safety objectives. Sufficient experienced staff, relevant and timely training, and funding for the necessary equipment and facilities are fundamental to creating a working environment in which everyone takes safety seriously.

In effective safety cultures, there are clear reporting lines, clearly defined duties and well understood procedures. Personnel fully understand their responsibilities and know what to report, to whom and when. Senior management reviews not only the financial performance of the organization but also its safety performance.

Safety culture, then, is both attitudinal and structural, relating to individuals and organizations. It concerns the requirement to not only perceive safety issues but also match them with appropriate action. Safety culture relates to such intangibles as personal attitudes and the style of the organization. It is therefore difficult to measure, especially when the principal criterion for measuring safety is the absence of accidents and incidents. Yet, personal attitudes and corporate style enable or facilitate the unsafe acts and conditions that are the precursors to accidents and incidents. Therefore, safety culture may affect systems safety either negatively or positively.

CHAPTER 2: ELEMENTS OF SAFETY MANAGEMENT SYSTEMS

2.1. GENERAL.

Effective safety management requires a systems approach to the development of safety policies, procedures and practices to allow the organization to achieve its safety objectives. Similar to other management functions, safety management requires planning, organizing, communicating and providing direction.

An SMS provides a proactive, systematic, and integrated method of managing safety for airport operators. Essential to an SMS are formal safety risk management procedures that provide risk analysis and assessment.

Generally accepted industry standards and International Civil Aviation Organization (ICAO) guidance describe Safety Management Systems in terms of four distinct elements. They include:

- Safety Policy and Objectives
- Safety Risk Management
- Safety Assurance
- Safety Promotion

2.2. SAFETY POLICY AND OBJECTIVES.

2.2.1 Safety Policy.

Management's commitment to safety should be formally expressed in a statement of the organization's safety policy. This policy should reflect the organization's safety philosophy and become the foundation of the SMS. The safety policy outlines the methods and processes that the organization will use to achieve desired safety outcomes. A safety policy will be signed by the Accountable Executive and will typically contain the following attributes:

- The commitment of senior management to implement SMS.
- A commitment to continual safety improvement.
- The encouragement of employees to report safety issues without fear of reprisal.
- A commitment by the organization to provide the necessary safety resources.
- A commitment to make the maintenance of safety the highest priority.

2.2.2 Safety Objectives.

SMS requires the full support of top management. SMS also requires that a top executive in the organization, one with the authority to adequately control resources, be assigned SMS

responsibilities. This person is called the Accountable Executive. In addition to having a basic understanding of the SMS, decision-makers must understand how to use SMS outputs as inputs to the system processes. Executives and managers must also understand when safety risk management is necessary. They must know when to elevate decisions and the supporting information to a higher-level. Some key elements of accountability within an organization are:

- Identification of the Accountable Executive.

- The organization's policy concerning responsibility and accountability, including written guidance regarding the safety authorities and responsibilities of all key personnel assigned to the airport.

- Identification within the system of someone responsible for administration of the overall SMS. Often, that one responsible person will be the Safety Manager. This person must report to the highest level of management to assure appropriate consideration of all reports, recommendations, and issues.

- At larger airports, operations may support the Safety Manager being a full-time permanent employee and in some cases having a support staff.

- The responsibilities of the Safety Manager must be clearly defined along with identified lines of communication within the organization.

- Depending on the size and complexity of the airport's operation, there may be a need for a safety committee. The safety committee acts as a source of expertise for the Safety Manager and will be chaired by the Safety Manager.

How an organization arranges its method of conducting business and managing safety will influence its resilience to hazardous situations and its ability to reduce risks. To ensure responsible safety management, successful organizations follow a disciplined approach to documentation and information management.

The process of formal documentation clarifies the relationship of the SMS to other organizational functions and the integration of SMS activities. Further, the documentation process defines how SMS activities relate to the organization's operating policies. Typically, this information should be documented in the Airport SMS Program Manual, safety reporting records, surveys, hazard reporting forms, and risk analysis/mitigation processes.

It is important that the organization maintain a record of the measures taken to fulfill the objectives of the SMS. These records may be required in the event of a formal investigation of an accident or serious incident and should be maintained in sufficient detail to ensure traceability of all safety-related decisions.

The Airport SMS should be distributed as necessary to educate and inform the airport staff. If the FAA adopts a future rule to make an SMS mandatory at certificated airports, the SMS would be documented as a part of or as an appendix to the Airport Certification Manual (ACM). As an

appendix to the ACM, the Airport SMS would be subject to the same document control measures as any other part of the ACM.

2.3. SAFETY RISK MANAGEMENT

Safety Risk Management (SRM) is at the heart of any Safety Management System. It is through the SRM process that an organization identifies hazards, determines potential risks, and designs appropriate risk mitigation strategies. Safety Risk Management is discussed in Chapter 3.

2.4. SAFETY ASSURANCE

Safety Assurance contains the elements of self-auditing, external auditing, and safety oversight. Safety oversight can be achieved through auditing practices and, given the diverse activities at commercial airports, the maintenance of high safety standards at an airport requires a regular program of monitoring and surveillance. This is in addition to the airport operator's existing responsibilities for self-inspection and correction of discrepancies under Part 139. An effective airport SMS oversight program should:

- Validate safety performance indicators and targets.
- Monitor adherence to safety policy through self-auditing.
- Allocate adequate resources for safety oversight.
- Solicit input through a non-punitive safety reporting system.
- Systematically review all available feedback from daily self-inspections, assessments, reports, safety risk analysis, and safety audits.
- Respond to FAA oversight inspection findings.
- Communicate findings to staff and implement agreed-upon mitigation strategies.
- Promote integration of systems thinking into the overall operation of the airport.

A systems approach to safety management must address all hazards and the possible risks these hazards may present to employees and the public. Individuals responsible for engineering the processes should work with multidisciplinary teams who have direct responsibility for analyzing hazards, identifying control measures derived from that analysis, and ensuring those measures are effective. Similarly, individuals responsible for operations should have direct responsibility for the safety of those operations and should be given the resources to implement the necessary controls.

Feedback is necessary to assess how well the SMS is working. This is achieved through safety oversight, performance monitoring, and continuous improvement processes.

The SMS should include a visible non-punitive safety reporting system supported by management. The safety reporting system should permit feedback from personnel regarding

hazards and safety-related concerns. The SMS should use this data to identify and address safety deficiencies. The safety reporting system may also identify and correct non-conformance to safety policy.

Safety auditing is a core safety management activity. Similar to financial audits, safety audits provide a means for systematically assessing how well the organization is meeting its safety objectives.

The Accountable Executive may choose to have an external agency audit the system (e.g., by a consultant or another airport operator). The safety audit, together with other safety oversight activities, provides feedback to managers concerning the overall safety performance of the organization.

Safety performance monitoring validates the SMS, confirming the organization's safety objectives. Through regular review and evaluation, management can pursue continuous improvements in safety management and may revise safety objectives to ensure that the SMS remains effective and relevant to the organization's operation.

2.5. SAFETY PROMOTION

The elements of Safety Promotion include:

- Training and education.
- Safety communication.
- Safety competency and continuous improvement.

The Safety Manager must provide current information and training relating to safety issues relevant to the specific operation of the airport. The provision of appropriate training to all staff, regardless of their position within the organization, is an indication of management's commitment to an effective SMS. Safety training and education should consist of the following:

- A documented process to identify training requirements.
- A validation process that measures the effectiveness of training.
- Initial (general safety) job-specific training.
- Recurrent safety training every 12 calendar months.
- SMS training is incorporated into indoctrination/initial training.
- Training includes human factors and organizational factors.

Training requirements and activities should be documented for each area of activity within the organization, including areas where training requirements are not defined by regulations as required by the Airport Certification Manual. A training file should be developed for each

employee, including management, to assist in identifying and tracking employee training requirements and verifying that the personnel have received the planned training. Any training program must be adapted to fit the needs, and complexity, of the airport in question.

The airport operator/safety manager should develop a system to communicate safety goals and procedures to all employees. The safety management system should be visible in all aspects of the airport operation. Systems safety is a good business practice and should be promoted accordingly. The safety manger should communicate the health of the airport SMS program through bulletins, briefings and training. The safety manager should ensure that lessons learned form hazardous occurrence investigations and case history or experiences, both internally and from other organizations, are distributed widely. The communication should flow both ways, from the safety manager to the organization and vice versa. Systems safety improvement will occur most efficiently if staff and employees are actively encouraged to identify potential hazards and propose solutions. Eventually, this communication will flow from the airport operator to the FAA as an evolution of the overall safety system. Some examples of organizational communication are:

- Safety seminars
- Safety letters, notices and bulletins
- Safety lessons-learned
- Bulletin boards, safety reporting drop boxes, and electronic reporting through web sites or E-Mail.
- A method to exchange safety-related information with other airport operators through regional offices or professional organizations.
- Eventually, a method to share safety-related information with the FAA electronically through existing web-based safety reporting systems currently being used by air operators.

As part of a continuous improvement process, the common element of many quality programs, the evolution of systems safety is dependent upon the SMS lifecycle. As hazards are identified, risks determined and mitigated through corrective actions, system improvements through training and revised policies and procedures, the follow-up begins the safety process over again. The diagram in Figure 2.1 gives a brief overview of the SMS lifecycle. This cycle should help to continually improve the system.

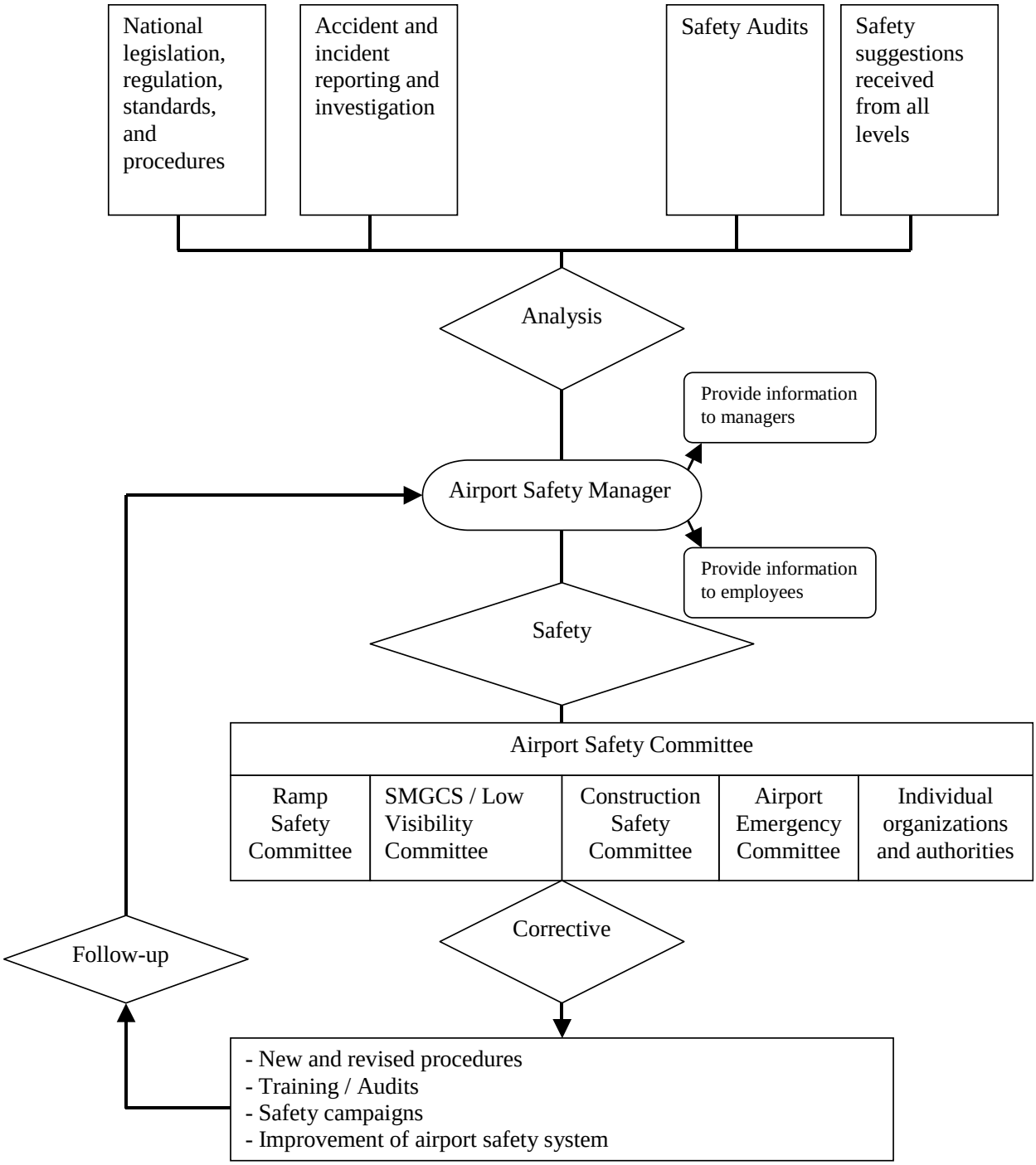

Figure 2 - 1. SMS Lifecycle Overview

CHAPTER 3: SAFETY RISK MANAGEMENT

3.1. General.

SRM is a fundamental component of SMS. To be truly effective a SMS must have a formal risk assessment program that identifies and documents hazards on the airport:

- determines associated risk(s)
- identifies the severity and probability of the occurring risk(s)
- develops mitigation strategies as appropriate
- applies, tracks, and monitors the mitigation strategy
- assesses and modifies strategies as necessary.

A hazard is a condition, object or activity with the potential for causing damage, loss, or injury. A risk is the chance of loss or injury measured in terms of severity and probability. Additionally, a risk is the chance that something is going to happen and the potential consequences if it does.

3.2. SRM Background Information:

SRM is a systematic, explicit, and comprehensive approach for managing safety risk at all levels throughout the airport. A comprehensive SMS using SRM will develop layers of safety built upon the measures taken to mitigate risk. These layers are examples of implemented protective measures such as vehicle driver's training programs, marking and lighting standards and reflective vests. An unsafe event can occur when gaps occur in the system's protective layers. These gaps are not static and may appear unexpectedly. In order for an incident or accident to take place there is normally a succession of gaps in a system that will line up and enable to event to occur as demonstrated in Figure 3.1.

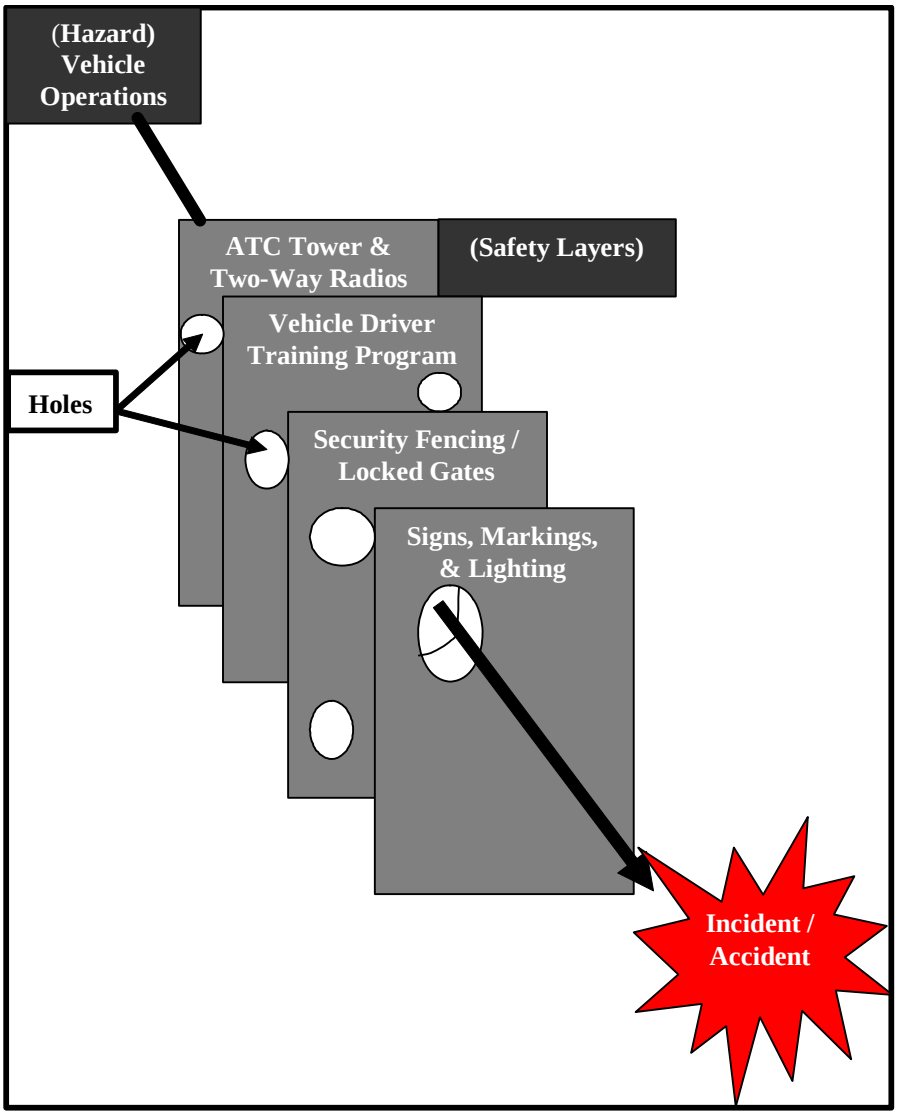

Figure 3 - 1. SMS Gap Model

3.3. The Five Phases of SRM

There are five phases to the SRM Process:

Phase 1. Describe the system,

Phase 2. Identify the hazards,

Phase 3. Determine the risk,

Phase 4. Assess and analyze the risk, and

Phase 5. Treat the risk (i.e., mitigate, monitor, and track).

Phase 1: **Describe the system**. When considering the environment of the airport system, consider all the safety-related functions already outlined in the ACM. The existing safety functions should steer the focus of the risk management analysis and will assist in determining potential mitigation strategies.

Phase 2: Identify Hazards. In this phase, hazards to the system (i.e., operation, equipment, people, and procedures) are identified in a systematic, disciplined way. There are many ways to do this, but all require at least four elements:

- Operational expertise.
- Training in SMS, and if possible, hazard analysis techniques.
- A simple, but well-defined, hazard analysis tool.
- Adequate documentation of the process.

The hazard identification effort should mirror the management structure and complexity of the airport in question. The airport manager at a small airport could conduct it alone, while a committee or group at a larger airport may conduct it. Regardless, airport operators must ensure that sufficient operations expertise, safety experience, and training are available to the person or the group to adequately conduct the assessment.

The hazard identification stage considers all the possible sources of system failure. Depending on the nature and size of the system under consideration, these should include:

- The equipment (example: construction equipment on a movement surface)
- Operating environment (example: cold, night, low visibility)
- Human element (example: shift work)
- Operational procedures (example: staffing levels)
- Maintenance procedures (example: nightly movement area inspections by airport electricians)
- External services (example: ramp traffic by FBO or law enforcement vehicles).

Phase 3. **Determine the risk.** In this phase, each hazard in its system context is identified to determine what risks exist, if any, that may be related to the hazard. In this phase, there is no determination of the severity or potential of the risk occurring. First, you must identify all potential risks and document them. Only when that is complete, would you move to Phase 4 and subject them to an assessment of the possible severity and potential.

In a very simple example, at your airport you may have identified the hazard of Foreign Object Damage (FOD) on the ramp, with the associated risk of the FOD being ingested into the engines of taxiing aircraft. You would document the hazard and the identified risk before moving to

Phase 4, where you would make a determination of the probability of that risk occurring, and the severity if such an event were to occur.

Phase 4: **Assess and Analyze the Risk.** In this Phase, an estimation of the level of risk is determined, such as by using the predictive risk matrix in Figure 3.2.

Risk is the composite of the predicted severity and likelihood of the outcome or effect (harm) of the hazard in the worst credible system state. In order to assess the risk of a hazard occurring, severity and likelihood are first determined.

Severity is determined by the worst credible potential outcome. Less severe effects may be considered in addition to this, but at a minimum, the most severe effects are considered. Do not consider likelihood when determining severity. Determination of severity is independent of likelihood. Over time you may develop data to quantitatively support your determination of severity and probability, but initially your risk determinations will most likely be qualitative in nature, based on nothing more than experience and best judgment.

The risk levels used in the matrix can be defined as:

- **High risk** – <Unacceptable level> proposal cannot be implemented, or activity cannot continue, unless hazards are further mitigated so that risk is reduced to medium or low level. Tracking and management involvement are required, and management must approve any proposed mitigating controls. Catastrophic hazards that are caused by:

  (1) single-point events or failures,

  (2) common cause events or failures, or

  (3) undetectable latent events in combination with single point or common cause events are considered high risk, even if extremely remote.

- **Medium risk** – <Acceptable level> minimum acceptable safety objective; proposal may be implemented, but tracking and management are required.

- **Low risk** – <Target level> acceptable without restriction or limitation; hazards are not required to be actively managed but are documented.

Hazards are ranked according to the severity and the likelihood of their risk, which is illustrated by where they fall on the risk matrix. Hazards with high risk receive higher priority for treatment and mitigation.

NOTE: *At U.S. airports, many of the airport operators' actions are governed by standards issued by the FAA. The FAA conducts a risk assessment of standards that affect safety before they are issued, and the airport operator would not be expected to duplicate that assessment as part of its SMS. Local effects of the action would still need to be considered.*

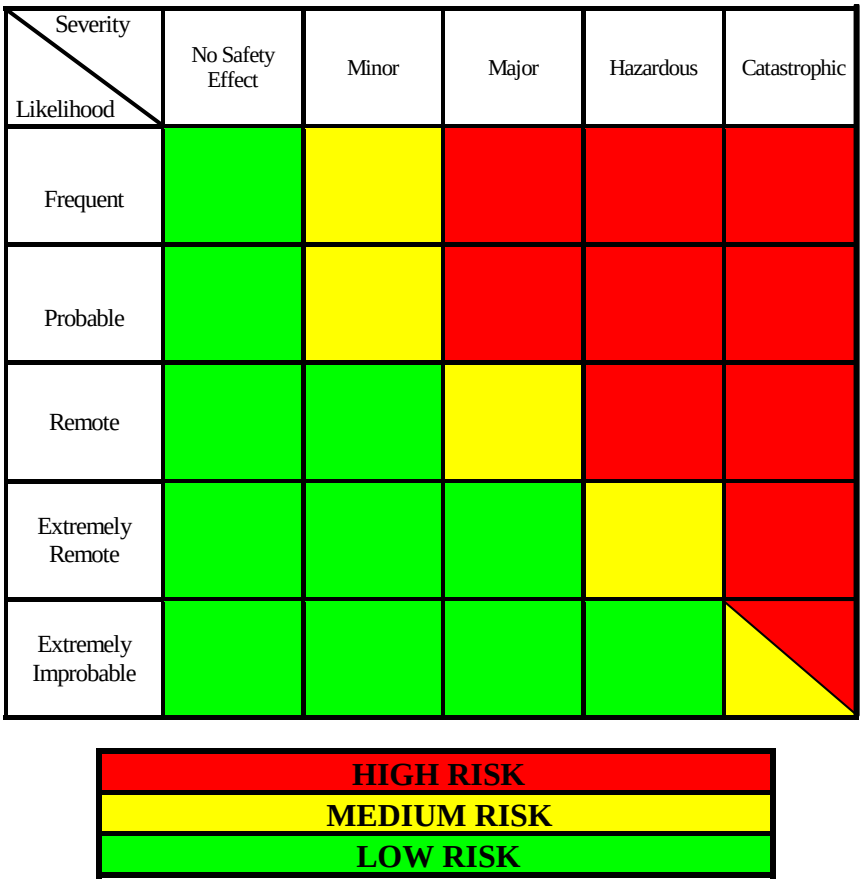

Figure 3 - 2. Predictive Risk Matrix

Phase 5: **Treat the risk.** In this phase, the airport operator develops options to mitigate the risk and alternative strategies for managing a hazard's risk(s). These strategies can be used to reduce the risk of the hazard's effects on the system. It should be noted that the majority of risk management strategies address medium and high-risk hazards. Low-risk hazards are, by definition, adequately controlled.

The risk management activity should identify feasible options to control or mitigate risk. Some options could include:

- Avoidance: selecting a different approach or not participating in, or allowing, the operation or procedure.
- Transfer: shifting the risk to another area.
- Assumption: accepting the likelihood, probability, and consequences associated with the risk.
- Research: mitigation of risk through the development or acquisition of additional research and/or experience.

- Control: development of options and alternatives that minimize or eliminate the risk.

Prior to operational use, any mitigation strategy must be validated and verified (as operational experience or data may support). Once validated, verified, and accepted, it then becomes an existing element of the system or operation.

Next, the effect of the proposed mitigation measures on the overall risk is assessed. If necessary, the process is repeated until a measure or combination of measures is found that reduces the risk to an acceptable level.

When risk is determined to be unacceptable, it is necessary to identify and evaluate risk mitigation measures by which the probability of occurrence and/or the severity of the hazard could be reduced. When risk mitigation strategies cross organizations, risk acceptance and approval from stakeholder organizations is necessary.

Risk mitigation requires a conscious management decision to approve, fund, schedule, and implement one or more risk mitigation strategies. The objective of this phase is to implement appropriate and cost-effective risk mitigation plans to mitigate hazards. Appropriate risk mitigation strategies are developed, documented, selected, and implemented. Hazard tracking is the core of this risk management phase.

Each medium and high-risk hazard is tracked until its risk is mitigated to an acceptable level and the effectiveness of the controls mitigating the risk is verified. The hazard record is kept for the lifecycle of the system change.

When assessing risk using a group or committee, remember that interactions between safety-group participants with varying experience and knowledge tend to lead to broader, more comprehensive, and more balanced consideration of safety issues than if an individual conducts the assessment. Thus, if possible, group analysis, by a group of appropriate subject matter experts, is recommended.

Utilization of safety risk management increases the level of safety in airport operations, maintenance, and new systems. Through SRM, hazards are assessed, mitigated, documented, tracked, and operational data are continuously monitored to provide feedback on hazards. Understanding the consequences of risk increases the ability to anticipate and control the impacts of internal and/or external events on a program.

Accountability is the foundation of an effective SMS. By accepting the safety risk mitigation strategy, the appropriate management official is certifying acceptance, and accountability for, the safety risk and/or the safety risk management strategy.

APPENDIX 1: STEPS TO AN EFFECTIVE SMS

The following is an example SMS progression referred to as the "Twenty Steps to an Effective SMS." The twenty elements, within the four areas of Acceptance, Organization, Training, and Program Requirements, listed below are recommended of all airport SMS programs regardless of system size. Moreover, the elements of each area must be specifically tailored to the complexity and size of the airport. The goal for airport operators is to tailor each area to meet the specific needs of the safety management system.

ACCEPTANCE

1. Acceptance of SMS as an effective business tool.
2. Management buy-in and commitment to SMS development.
3. Establishment and definition of authority and responsibilities for SMS functions within the organization.
4. Determination and communication of safety objectives, targets, indicators and goals.
5. Establishment of a 'just' (non-punitive) internal reporting system.

ORGANIZATION

6. Determination and assignment of the responsible/accountable executive.
7. Establishment of an internal SMS organizational structure.
8. Assignment (if warranted) of an organizational Safety Manager, responsible for administration of the safety program.
9. Establishment of safety committee(s) and/or group(s) as warranted.
10. Involvement of all employees in all aspects of SMS planning/implementation.

TRAINING

11. Establishment of SMS training programs and identification of safety related competency requirements.
12. Establishment of a process of hazard identification.
13. Establishment of risk management processes.
14. Documentation of all SMS requirements/functions.
15. Establishment of a system to disseminate/communicate safety information to all employees on a routine and as-needed basis.

PROGRAM REQUIREMENTS

16. Establishment of a system of accident/incident reporting.

17. Conduct and document accident/incident investigations.

18. Establishment of data collection programs to collect safety related information.

19. Conduct of SMS/safety program audits and management reviews.

20. Establishment of a program of safety related incentives and initiatives for employees (as warranted).

The four elements of SMS described in Chapter 3 and the five Phases of SRM described in Chapter 3 constitute the mandatory elements of an Airport SMS.

Certificated airports are inherently safe and offer, as contained within the Airport Certification Manual (ACM), much of what could be the foundation of a safety management system. However, there are items required of an SMS that are not specifically addressed by Part 139 certification. Therefore, airport operators may build upon these existing ACM elements to develop and implement a functioning Safety Management System.

Safety Program Manual (SPM) Contents

Following is an example of what a SMS Program Manual (SPM) should contain. This documentation, in compliance with the SMS requirement, could be described within the applicable sections of the ACM or could be developed into an SPM that may be included in the ACM as an appendix.

1. Cover page, table of contents and page control.

2. The Accountable Executive's description of authority and responsibilities.

3. Written safety policy statement. (See Chapter 2 of the AC for additional guidance.)

4. Identification of the safety goals and objectives of the organization (include consideration of specific goals, targets, and indicators).

5. Development of the SMS implementation plan and timeline.

6. Lines of succession of airport safety operational responsibility.

7. The names and delineation of the safety responsibilities of all key personnel including, but not limited to the following:

    a. Accountable Executive (AE).

    b. Airport manager (if different from the AE).

c. Department heads/managers.

d. Established Safety Committees and Chairpersons.

8. Identification of the Safety Manager (the SM would administer the safety program and serve as the key point-of-contact and coordinator of safety related issues).

9. Identification and description of safety committee(s)/group(s).

10. Description of the safety risk management process (as discussed in Chapter 3 of this AC).

11. Description of safety incentive or reward program(s) .

12. Description of the safety communication process and communication initiatives.

13. Incident and accident investigation process (include required documentation and analysis of information developed).

14. Procedures identifying a non-punitive safety self-reporting system for all employees.

15. Documentation processes, forms, tools and requirements.

NOTE: *A few recommended forms are attached… you may develop others as internal need is determined. Include examples of safety-related and safety reporting forms specific to the operation of the Airport SMS Program.*

16. Procedures for conducting the self-audit and safety-oversight, SMS performance monitoring, initiatives.

17. Safety related training, to include initial, job related, SMS, and recurrent training within every 12 consecutive calendar months.

18. A description of the airport quality management program (if applicable) and its integration into the airport SMS

19. Description of how each element within the ACM addresses SMS. This could be part of the Airport SMS Program Manual or addressed individually within each section of the ACM.

20. Description of a plan to integrate apron safety management into the airport SMS.

Hazard/Risk Control & Mitigation Tracking Log

Date	Hazard	Risk Description	Current measure used to control risk(s)	Further actions identified as necessary to control risk	Office or Person responsible for mitigation strategies	Existing or current risk index

Hazard/Risk Control Tracking Log

Work Observation Form

(To be used when observing work for purposes of evaluation and hazard identification.)

Date:_____ Observer:_____

Location: _____ Department:_____

Item # (Task)	Procedure	Followed: Yes	Followed: No	Comments

Positive observations:

_____
_____
_____
_____

Comments:

_____
_____
_____

Job Hazard Analysis Form

JHA #: _____ Job Title Being Analyzed: _____

Department/Location: _____

Name Of Person Completing JHA: _____

Name Of Person/s Assisting In JHA: _____

Date Completed: _____ Date Revised: _____ Date Reviewed: _____

Recommended PPE: _____

Basic Job Step	Hazard Present In Each Step	Safe Procedure

Accident/Incident Investigation Data Collection Form

Type of Incident: ☐ Injury ☐ Weather ☐ Equip ☐ Field ☐ Terminal			**Case #:**		
Employee Name:			**Employee #**		
Supervisor:			**Dept:**		
Field Location of Incident:			**Movement area Y/N:**		
Hospital (if applicable):					
Date of Incident:		**Time of Incident:**		**Date Reported:**	
Type of Occupational Injury/Illness or Damage:					
Part of Body Injured or equipment Damaged:					
Probable Cause of Incident:					
Incident Site/Location of Occurrence:					
Type of Equipment Involved (if applicable.):					
Related Act/Condition:					
Weather Conditions at Time of Incident:					
Description of Incident *(Describe the incident in detail)*:					
Investigation *(Provide following information when applicable: Who was interviewed, what was photographed or diagrammed what procedures were reviewed, what training records were reviewed, reenactments, etc.):*					
Area Supervisor (name of person responsible for the area the incident occurred in):					
Date of Analysis:		**This Form Completed By:**			

List Contributing Factors:

1.	
2.	
3.	
4.	
5.	

Corrective Actions:
List corrective actions for each contributing factor:

Corrective Action 1	**Owner:**		**Est. Completion Date:**	
Corrective Action 2	**Owner:**		**Est. Completion Date:**	
Corrective Action 3	**Owner:**		**Est. Completion Date:**	
Corrective Action 4	**Owner:**		**Est. Completion Date:**	
Corrective Action 3	**Owner:**		**Est. Completion Date:**	
Corrective Action 5	**Owner:**		**Est. Completion Date:**	

Analysis Checklist:

- ☐ **Photographs**
- ☐ **Witness statement(s)**
- ☐ **Employee Statement(s)**
- ☐ **Diagrams**
- ☐ **Equipment History**
- ☐ **Walk-around Checklists**
- ☐ **Supervisor Statement(s)**
- ☐ **Checklists**
- ☐ **Training Records**
- ☐ **Police Reports**

Additional Comments
